

## WHAT IS CLAIMED IS

1. A gas turbine plant comprising:
  - an air compressor;
  - a gas turbine including at least one high temperature section;
  - a driven equipment, said air compressor, said gas turbine and said driven equipment being operatively connected in series;
  - a gas turbine combustor arranged between the air compressor and the gas turbine;
  - a fuel system for supplying a fuel to the gas turbine combustor, said fuel system being provided with a fuel valve;
  - a high pressure air supply system operatively connected to the high temperature section of the gas turbine for supplying a high pressure air from the air compressor thereto;
  - a heat exchange section provided for the high pressure air supply system for heating the fuel supplied to the gas turbine combustor from the fuel system;
  - a pressure rising compressor for rising a pressure of the high pressure air after heating the fuel and for supplying the high pressure air to at least one of the high temperature sections of the gas turbine as a cooling medium;
  - at least one high pressure air recovery system provided with a high pressure air recovery check valve for recovering an overall quantity or part of the high pressure air after cooling the at least one of the high temperature sections of the gas turbine to the air compressor;
  - an accumulator which has a flow control valve on an outlet side of the check valve on the outlet side of the pressure rising compressor; and
  - a valve opening control means adapted to close the fuel valve of the fuel system when an accident happens in the pressure rising compressor while opening a discharge valve provided on an inlet side of the high pressure air recovery check valve of the high pressure air

recovery system and adapted to open the flow control valve so that an accumulated air from the accumulator is supplied to the at least one of the high temperature sections of the gas turbine.

2. A gas turbine plant comprising:

an air compressor;

a gas turbine including at least one high temperature section;

a driven equipment, said air compressor, said gas turbine and said driven equipment being operatively connected in series;

a gas turbine combustor arranged between the air compressor and the gas turbine;

a fuel system for supplying a fuel to the gas turbine combustor;

a high pressure air supply system operatively connected to the high temperature section of the gas turbine for supplying a high pressure air from the air compressor thereto;

a heat exchange section provided for the high pressure air supply system for heating the fuel supplied to the gas turbine combustor from the fuel system;

a pressure rising compressor for rising a pressure of the high pressure air after heating the fuel and for supplying the high pressure to at least one of the high temperature sections of the gas turbine as a cooling medium;

at least one high pressure air recovery system provided with a high pressure air recovery check valve for recovering an overall quantity or part of the high pressure air after cooling the at least one of the high temperature sections of the gas turbine to the air compressor; and

a valve opening control means adapted to open a discharge valve provided on an outlet side of the pressure rising compressor when an accident happens in the pressure rising compressor so that a residual high pressure air of the air compressor conversely flows into the

at least one of the high temperature sections of the gas turbine and adapted to open the discharge valve provided on an inlet side of the heat exchange section.